REMARKS

I. Status of the Claims

Prior to the above Amendment, claims 30-56 were pending in this application. Claims 1-29 stand withdrawn as directed to a non-elected invention. The Examiner finally rejected the pending claims on April 1, 2005. Applicants appealed this rejection to the Board of Patent Appeal and Interferences ("the Board") on January 9, 2006. In view of the Applicant's remarks, the Examiner reopended prosecution in an Office Action dated April 12, 2006. The Applicants responded to the Examiner's rejections in a brief filed December 1, 2006. On March 25, 2008, the Board issued a Decision on Appeal.

As stated above, Applicants hereby re-open prosecution of this application to respond to the Board's rejection.

II. Status and Disposition of the Claims

By the above amendment, claim 30 has been amended to recite a specific C_3 to C_5 monosacchride, xylose, in a specific concentration (0.01% to 5.00% of the total weight of the composition). Claim 47 has been also been amended to incorporate the limitations of amended claim 30. Claims 31-46 and Claim 51 have been cancelled without prejudice or disclaimer. Thus, claims 30, 47-50, and 52-56 are now pending and under consideration on the merits. Full support for these amendments and new claims can be found in the originally-filed specification and claims. Accordingly, no new matter has been added by these amendments.

III. Rejections under 35 U.S.C. § 112

Claims 30-56 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. *See* Office Action dated 4/12/2006 at page 2. In the Decision on Appeal dated May 23, 2008, the rejection under 35 U.S.C. § 112, first paragraph, was reversed because those of ordinary skill in the art would understand the Specification's description to show possession of a method for treating heat damages, generally. In view of the Board's decision, the rejection is now moot.

IV. Rejections under 35 U.S.C. § 103(a)

Claims 30-56 stand rejected under 35 U.S.C. § 103(a) as being allegedly "unpatentable over *Wisotzki et al.* (U.S. Patent No. 4,900,545) in view of *Buheitel* (U.S. Patent No. 6,116,250) OR *Naito et al.* (U.S. Patent No. 4,935,229). *Id.* at 5.

In making a rejection under 35 U.S.C. § 103, the Office "bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. *See* M.P.E.P. § 2142. In its decision in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 U.S.P.Q. 2d 1385 (2007), the Supreme Court confirmed that the "framework for applying the statutory language of §103" was still based on its landmark decision in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). Under *Graham*, there are four factors for consideration when determining whether an invention is obvious:

(1) the scope and content of the prior art;

(2) the differences between the prior art and the claims at issue;

(3) the level of ordinary skill in the art; and

(4) secondary considerations.

383 U.S. at 17, 148 U.S.P.Q. at 467. However, the Court indicated that there is no necessary inconsistency between the idea underlying the teaching, suggestion, or motivation ("TSM") test and the *Graham* analysis. *KSR*, 127 S. Ct. at 1741, 82 U.S.P.Q. 2d at 1389. As long as the TSM test is not applied as a "rigid and mandatory" formula, the test can provide "helpful insight" to an obviousness inquiry. *Id.* Applicant respectfully traverses this rejection because even if Witsozki, Buheitel, or Naito and Babenko can be properly combined in the manner asserted by the Office, which Applicants do not concede, the resultant combination does not possess each and every element of at least amended claim 30.

According to the Examiner, Witsozki teaches "a method for regenerating, revitalizing or repairing hair comprising applying mono- or disaccharide sugar, particularly of pentoses (5 C atoms) and disaccharides derived from pentoses." *Office Action* dated 4/12/2006 at page 6. The Examiner states "Witsozki teaches that mono- or disaccharides are any aldoses and ketoses or their mixtures. Witsozki further teaches that suitable monosaccharides include glucose, mannose, galatose, ribose, arabinose, xylose, cylose, fructose, sorbose, while suitable disaccharides include sucrose, lactose, maltose, cellobiose (col. 2, lines 36-49)." *Id.* The Examiner, also, relies on Witsozki for the teaching that sugars are present in the composition in percentages ranging from 0.1% to 8% by weight. *Id.* at 7.

Finally, the Examiner alleges "Witsozki teaches at col. 6, lines 3-5, that, 'in every case, it was found that the hairs had been regenerated, i.e., the split ends had been partially *repaired*.'" *Id.*

The Examiner alleges Buheitel teaches "a permanent hair shaping composition and process for permanently shaping hair comprising the step of allowing the permanent shaping composition to advantageously react at a higher temperature, particularly 30° to 45°C." *Id.* Therefore, the Examiner concludes it would have been obvious to the skilled artisan to employ higher temperatures, such as 30° to 55°C, as taught by Buheitel within the processes employed by Witsozki, who teaches a method of repairing split-end hair, comprising sugars because Buheitel teaches that it is advantageous to allow the permanent shaping composition to advantageously react at higher temperatures in order to lessen the reaction time for severely damaged hair. *Id.* at 8.

Finally, the Examiner relies on Natio for its alleged teaching of a heating permanent waving agent and method comprising heating hair at a temperature of 40° to 160°C. *Id.* The Examiner further states that Naito teaches the application of the waving agent using heat, is advantageous in solving problems of known permanent waving agents because, since highly concentrated alkaline agents or reducing and oxidizing substances are not used, damages of the hair caused by the elution of hair proteins can be mitigated. *Id.* Therefore, the Examiner finds it would have been obvious to employ the higher temperatures of Naito with the processes employed by Witsozki because it is especially advantageous to treat healthy hair at

higher temperatures. The Examiner concludes that the expected result would be an improved, gentle and non-irritating hair treatment method for use on both healthy and damaged hair. *Id.*

Although Applicants disagree with the Examiner's allegations, Applicants have amended the claims solely in an effort to advance prosecution and submit that this rejection is thereby rendered moot and should be withdrawn for the reasons set forth below.

Applicants have amended claim 30 to recite a method for protecting keratin fibers from extrinsic damage comprising applying a composition comprising a specific monosaccharide, xylose and its derivatives, at a concentration specific ranging from 0.01% to 5.00% relative to the total weight of the composition. As noted *supra*, the Examiner alleges that Wisotzki teaches "that mono- or disaccharides are any aldoses and ketoses or their mixtures." Office Action dated 4/12/2006 at page 3. Applicant's note that Wistozki uses a C6 sugar (glucose) in the examples and mentions in column 2, lines 47-49 that glucose is preferably used in the composition for repairing split ends. Wisotzki's disclosure of sugars fails to disclose any of the unique benefits of applicant's claimed sugar and the skilled artisan would not have been motivated to select a non-preferred sugar and use it a the claimed method, and as such, the Examiner can not support a *prima facie* case of obviousness based on the cited references. *See* M.P.E.P. 2144.08; *In re Ruschig*, 343 F.2d 965, 974, 145 USPQ 274, 282 (CCPA 1965) (Rejection of claimed compound in light of prior art genus based on *Petering* is not appropriate

where the prior art does not disclose a small recognizable class of compounds with common properties.).

Similarly, Buheitel and Naito do not remedy the deficiencies of Wisotzki. In fact, Buheitel and Naito are silent with respect to xylose, thus, as with Wistozki, the Examiner's secondary references fail to provide one of ordinary skill the motivation to pick out the single monosaccharide (xylose).

Applicants have thereby incorporated a specific monosachride (xylose) for protecting keratinous fibers from extrinsic damage at a concentration ranging from 0.01% to 5.00% relative to the total weight of the composition. For the reasons set forth above, Applicants respectfully submit that the Examiner's cited reference lack the motivation to select xylose at the claimed range and, thus, the Examiner has not established a *prima facie* case of obviousness with respect to the claims as presently amended. Accordingly, Applicants respectfully request that this rejection be withdrawn.

V. Rejections under 35 U.S.C. § 103(a)

Claims 30-56 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Koga et al.* (U.S. Patent No. 5,660,838) in view of *Buheitel* or *Naito*. *See Office Action* at page 9 dated 4/12/2006.

In discussing the teachings of Koga, the Examiner states that "xylobiose preparations are effective not only in reducing excessive roughness and dryness of the skin to impart a natural moistness and luster but also in reducing excessive roughness and dryness of the hair to give a natural oiliness." *Id.* at 10. The

Examiner notes that "Koga teaches that xylobiose composition contains xylan saccharified products other than xylobiose, such as xylose and xylotriose." *Id.* Furthermore, the Examiner alleges that Koga discloses that xylobiose is taught to be contained in an amount of 0.0001% to 20-wt%. *Id.* As a result, the Examiner finds that it would have been obvious to one of ordinary skill in the art to "use the xylosbiose composition of Koga because Koga teaches that xylobiose exhibits high moisture retaining capabilities. *Id.* at 11.

As with the Examiner's aforementioned obviousness rejection, nothing in any of the cited references would motivate the skilled artisan to specifically use only xylose in the claimed concentration to protect keratinous fiber from extrinsic damage. Even more, the Board has reversed this rejection as it applied to the claims 33-44. *See* Decision on Appeal at page 12. The Board reasoned that although "Koga disclosed that xylobiose can be produced by a process that results as well in production of xylose and xylotriose, it does not provide any basis for concluding that the disclosed compositions inherently contained xylose in the amount required by the instant claims." Solely in an effort to advance prosecution, the Applicants have amended claim 30 to incorporate xylose at a concentration ranging from 0.01% to 5.00%. Accordingly, for the reasons set forth above, Applicants respectfully request that this rejection be withdrawn.

VI. Rejections under 35 U.S.C. § 103(a)

Claims 30-56 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Syed et al.* (U.S. Patent No. 5,641,477) in view of *Buheitel* or *Naito*. *See Office Action* at page 13 dated 4/12/2006.

The Examiner relies on Syed for teaching a method for the reduction of hair damage and a process for relaxing hair fibers, comprising applying to the hair fibers, a lanthioniztion composition that comprises sugars, resulting in less damaged hair that has greater tensile strength as compared to hair that does not contain sugar. *Id.* at page 14. More specifically, the Examiner alleges representative sugars that can be used in the composition of Syed include, but are not limited to, sucrose, glucose, fructose, soribtol, glycerol. *Id.* The sugars preferably used are sucrose or sorbitol. *Id.* Because Syed teaches the addition of sugars to a composition increases tensile strength of hair, the Examiner believes it would have been obvious to use the teachings of Syed in combination with either Buheitel or Naito to arrive at the Applicants' claimed invention. *Id.*

The Board has reversed this rejection as it applied to the claims 30-56. *See* Decision on Appeal at page 16. The Board agreed with Applicants that the Examiner had not provided an adequate basis for concluding that Syed, Buheitel, and Naito would have made the method of unamended claim 30 prima facie obvious. In an effort to advance prosecution, the Applicants have amended claim 30 to recite a method for protecting keratinous fiber from extrinsic damage comprising applying a specific sugar at a specific concentration to the keratinous

fiber. For at least the foregoing reasons, Applicants respectfully request that this rejection be withdrawn and that the claims as amended be allowed.

VI. Conclusion

Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By: _____
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